

Application No. 09/589,675

LSCP 1000-1

REMARKS

In the Final Official Action mailed 16 June 2003, the Examiner reviewed claims 1-33. The Examiner rejected claims 1-33. Claims 1-3, 9, 14, 15, 17-27, 30 and 33 are rejected under 35 U.S.C. 102(b); and claims 1-33 are rejected under 35 U.S.C. 103(a).

Applicant has amended claims 1, 17, 22, 26 and 33, and claim 2. Claims 1-33 remain pending.

Rejection of Claims 1-3, 9, 14, 15, 17-27, 30 and 33 under 35 U.S.C. 102(b)

Claims 1-3, 9, 14, 15, 17-27, 30 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Sinofsky, U.S. Pat. 4,852,567. Sinofsky '567 describes a catheter with a laser at the tip. The Sinofsky '567 laser includes a resonant mirrors, and generates coherent light by stimulated emissions.

Independent claims 1, 17, 22, 26 and 33, and claim 2, are amended to further emphasize the distinction between lasing, which is based on stimulated emissions, and spontaneous emissions according to the present invention.

In the present application, the claims are limited to systems using fluorescent elements which operate by spontaneous emission, as opposed to lasers which have resonant cavities and operate by stimulated emission, for producing a variety of therapeutically relevant wavelengths of diffuse light inexpensively. In the specification, the inventors stated, "Because the device utilizes fluorescence rather than lasing to generate emitted radiation, the device can be manufactured inexpensively, is significantly less prone to malfunction, and is relatively easy to use when compared to prior art systems utilizing dye lasers." (Page 4, lines 15-20). Although both stimulated emission in lasers and spontaneous emission by fluorochromes can be said to operate by fluorescence, the two mechanisms are substantially different. Attached please find an excerpt from Siegman, LASERS, University Science Books, 1986, pages 22-24, which describes the fundamental differences.

In one alternative Sinofsky '567 describes using a non-linear crystal in place of the laser. However, non-linear crystals operate by mixing refracted beams to produce

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coherent light at sum and difference wavelengths of the input beams. Non-linear crystals do not operate by spontaneous emission.

Sinofsky '567 does not describe a system that operates by spontaneous emission.

Accordingly, reconsideration of rejected claims 1-3, 9, 14, 15, 17-27, 30 and 33 as amended is respectfully requested.

Rejection of Claims 1-12, 14, 17-30 and 33 under 35 U.S.C. 103(a)

Claims 1-12, 14, 17-30 and 33 under 35 U.S.C. 103(a) as being unpatentable over Jegorov et al. in view of Sinofsky, Pat. 6,270,492, and in view of Byren et al., U.S. Pat. 4, 853, 528. Jegorov is also a laser based system, unlike the system based on spontaneous emission as recited in the claims of the present application. Sinofsky '492 describes a catheter with a scatterer 22 at the tip, which is needed for laser based systems. It does not teach placement of a fluorochrome at the catheter tip which generates radiation by spontaneous emissions. Likewise, the Byren et al. patent does not overcome the deficiencies of the other references.

Accordingly, reconsideration of rejected claims 1-12, 14, 17-30 and 33 as amended is respectfully requested.

Rejection of Claim 13 under 35 U.S.C. 103(a)

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jegorov et al., in view of Sinofsky and Byren et al., and in further view of Talpalriu et al., Pat. 6,171,302. This claim is allowable for the reasons discussed above.

Accordingly, reconsideration of rejected claim 13 as amended is respectfully requested.

Rejection of Claims 15, 16, 31 and 32 under 35 U.S.C. 103(a)

Claims 15, 16, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jegorov et al., in view of Sinofsky and Byren et al., and in further view of Braun et al., Pat. 5,425,754. These claims are allowable for the reasons discussed above.

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Accordingly, reconsideration of rejected claims 15, 16, 31 and 32 as amended is respectfully requested.

CONCLUSION

It is respectfully submitted that this application is now in condition for allowance.

The Commissioner is hereby authorized to charge any fee determined to be due in connection with this communication, or credit any overpayment, to our Deposit Account No. 50-0869 (LSCP 1000-1).

Respectfully submitted,

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